

L 48283-65

ACCESSION NR: AP5012371

distance equal to 15 Å a very sharp increase of nonradiative recombination probability begins. An increase of nonradiative recombination begins if two  $(\text{SiO}_2)_2$  tetrahedra are placed between two neighboring  $\text{Nd}^{3+}$  ions. Since at such a distance any essential overlapping of wave functions is improbable, such mechanisms of transfer of excitation energy associated with a fluorescence quenching (e.g.,  $(^4\text{F}_{3/2} \rightarrow ^4\text{I}_{13/2}) \rightarrow (^4\text{I}_{9/2} \rightarrow ^4\text{I}_{15/2})$ ) must be taken into consideration. A statistical distribution of  $\tau$  values (decay time) demonstrates a statistical distribution of  $\text{Nd}^{3+} \cdots \text{Nd}^{3+}$  distances and shows a relatively high homogeneity of the spatial distribution of neodymium, the lowest detectable distance being only about 10% smaller than the average one, and the highest being about 30% higher than the average value. Orig. art. has: 3 formulas, 13 figures, and 7 tables. [JA]

ASSOCIATION: Institute of Physics, Czechoslovak Academy of Sciences, Prague

SUBMITTED: 22Feb65

ENCL: 00

SUB CODE: OP,MT

NO REF SOV: 001

OTHER: 022

ATD PRESS: 3250

Card 2/2

PATEK, Karel (Prague)

Quantum light generation and present state of research.  
Pouroby mat. fyz. 1978, 18, 1, 1-10.

L 15238-65 EWG(j)/EWA(k)/FBD/EWT(l)/EEG(k)-2/EEG(t)/T/EEG(b)-2/EWP(k)/EWA(m)-2/  
EWA(h) Pf-l/P1-l/P1-l/Pn-l/Po-l/PeB IJP(c)/BSD/AEDC(a)/AFWL/SSD/ASD(a)-5/AFMD(t),  
AFETR/AFTC(p)/RAEM(a)/RAEM(c)/ESD(c)/ESD(gs)/ESD(t) -WG  
ACCESSION NR: AP4044605 2/0028/64/000/004/0205/0222

AUTHOR: Patek, Karel (Prague)

TITLE: Lasers and the present state of the art

SOURCE: Pokroky matematiky, fyziky a astronomie, no. 4, 1964, 205-222

TOPIC TAGS: laser, coherent light, solid state laser, gas laser, semiconductor laser

ABSTRACT: This pedagogical article discusses the theoretical principle of operation of lasers and explains how they differ from other light sources. The theory and operation of solid-state (crystal), gas, and semiconductor lasers are analyzed and the present state of laser research is reviewed at some length. It is pointed out that lasers, far from being the object of basic research that they were in the years 1960-62, have become tools in their technical application, as well as in their application in physics. The progress made to date in laser technique is summed up, and the laser as an instrument in physics research is surveyed. Orig. art. has: 16 figures and 5 formulas.

Cord 1/2

L 15238-65

ACCESSION NR: AP4044605

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

Card 2/2

HAUPTMANOVA, K.; PANTOFLICEK, J.; PATEK, K.

Optical and luminescence properties of the glass activated by neodymium.  
Chekhosl fiz zhurnal 14 no.9:698-706 '64.

1. Institute of Physics, Czechoslovak Academy of Sciences, Prague  
8, Lumumbova 1; Faculty of Physics, Charles University, Prague 2,  
Ke Karlovu 5.

ACCESSION NR: AP4042321

Z/0037/64/000/004/0394/0396

AUTHOR: Patek, Karel

TITLE: Seminar on quantum generators of light

SOURCE: Ceskoslovensky casopis pro fysiku, no. 4, 1964, 394-396

TOPIC TAGS: laser, laser application, laser theory, laser material

ABSTRACT: During the week of 3--8 February a seminar on lasers was held in Liblice. It was organized by the Physics Institute of the CSAV under the auspices of JCMF and in conjunction with UPT CSAV in Brno. The purpose of the seminar was to acquaint those studying lasers or their applications with the basic information on quantum generators, and discuss the present state of laser research and future tasks. The seminar was attended by 71 participants and a smaller number of guests who attended specific lectures. Workers of nine research institutions reported on the progress of their work.

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The actual program consisted of 15 lectures. In an introductory lecture, K. Patek, ScC. (FU CSAV, Prague) summarized the basic information on lasers and their new physical and technical possibilities. Engineer I. Stolla (FJTF, Prague) discussed the inversion of quantum levels, methods of obtaining inversion, and the kinetics of quantum transitions in current installations with two, three, and more levels. Corresponding Member of CSAV, M. Trlifaj (FU CSAV, Prague) presented fundamental methods for solving Schroedinger's equation for a many-electron atom. Professor B. Havelka (Palacki University, Olomouc) discussed the main types of optical resonators of quantum generators and their relative merits. Engineer V. Bocka (UPT CSAV, Brno) discussed the use of a Fabry-Perot interferometer for the study of the monochromatic radiation of the laser. Engineer D. Vavrouch (UPT CSAV, Brno) discussed the main types of constant-phase lasers. E. Podskalsky, ScC. (VUVET, Prague) spoke of xenon discharges for lasers. The next two lectures (Engineer V. Kment, Association of Chemistry and Mining, Ustni n. L. and Engineer J.

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Jindra, VUM, Turnov) were devoted to the growing of single crystals for lasers. Engineer F. Petru (UPT CSAV, Brno) spoke about the parameters of gas lasers from the theoretical-optics and technical point of view. Engineer Zd. Vesela spoke about active substances of gas lasers from the spectroscopic point of view. These lectures included results of experiments on the Ne-He gas laser. Physics candidate T. Peceny (VUST, Prague) lectured on the theory of the semiconductor laser. Physics candidate T. Simecka (UFPL CSAV) presented results of experiments on semiconductor lasers. The last two lectures were devoted to laser physics and were delivered by A. Fouskova ScC. (FU CSAV, Prague) and by Engineer J. Blahla.

The future tasks of laser research were discussed. The most urgent task was found to be the beginning of small-scale production of the developed types of lasers so that samples of Czech lasers could be exhibited at the BVV in 1964. This refers to ruby and gas lasers. It was found unfortunate that no researcher had taken advantage of the ready availability in Czechoslovakia of good-quality

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ACCESSION NR: AP4042321

gallium arsenide single crystals. It was recommended that along with the existing coordination of CSAV, a main workshop "Quantum Generators" should also be established at VUVET Prague for tasks under the jurisdiction of SKVT; institutes of CSAV should also be represented in it. This seminar will be followed by a second part devoted to laser applications, organized by UPT CSAV, Brno.

ASSOCIATION: None

SUBMITTED: 26Feb64

ENCL: 00

SUB CODE: OP

NR REF SOV: 000

OTHER: 000

Card 4/4

L 10601-65 EMO(1)/EWA(k)/FBD/EST(I)/EMP(e)/ENT(m)/EEC(k)-2/EEC(t)/T/EEC(b)-2/  
EMP(k)/EMP(b)/EWA(m)-2/EWA(h) Fm-l/Fo-l/Fq-l/Pf-l/Peb/Pi-l/Pl-l IJP(c)/AJSTR/  
ESD/ASD(d)/AFWL/AS(m)-2/APGC(b)/SSD/RAEM(a)/ASD(x)-5/ESD(gg)/ESD(t)/RAEM(t) WH/  
ACCESSION NR: AP4041660 WJ E/0039/64/025/007/0390/0393

AUTHOR: Patek, Karel

TITLE: Quantum generator with neodymium glass

SOURCE: Slaboprouiz obzor, v. 25, no. 7, 1964, 390-393

TOPIC TAGS: quantum light generator, laser, neodymium glass, neodymium activator, luminescent material, active cavity, stimulated emission, emission line wavelength, sensitivity threshold, far field and near field photography, discharge tube, narrow absorption band material, absorption spectrum

ABSTRACT: The author describes a solid-state laser built at the FU CSAV. A luminescent material constitutes the active center. The device was designed to be as universal as possible, to operate with all the materials at hand from which it is possible to make a xenon discharge tube, to operate at room temperature, at liquid nitrogen temperature (77°K), and in certain cases at liquid hydrogen temperature (20°K). The generated emission includes the red region of the spectrum to 1,200 nm. Stimulated emission was generated for the first time with a cavity consisting of a glass rod containing 1.52% neodymium in the

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L 10601-65

ACCESSION NR: AP4041660

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form of  $\text{Nd}^{+3}$  luminescent centers made by the Statni vyzkumny ustav sklarsky (State Research Institute for Glass) and ground to the necessary high tolerances by the Laborator optiky CSAV (Optics Laboratory of the CSAV). Stimulated emission of emission line wavelength 1,050 nm was also generated at room temperature. For a diagram of the original generator (see Fig. 1 of Enclosure). The photomultiplier uses a silver-cesium oxide cathode sensitive in the red to near infrared spectral region (sensitivity threshold of the cathode is around 1,200 nm). By removing cover 15 and prism 11 it is possible to directly follow the emerging light ray and to "far field" and "near field" photograph the emission intensity distribution. As the available discharge tube proved unsuitable, a special tube was made which is designed to hold xenon under 20 to 30 Mg of pressure and features electrodes better able to withstand the peak current (from 3 to 5 kA). As its emission spectrum covers the whole region of visible light and of near ultraviolet radiation, this discharge tube is suitable for materials with narrow absorption bands such as laser materials with trivalent rare earths as activators. The energy of the described tube reaches 1,600 J. The tube requires further improvement, since the energy efficiency of the tube is only 2% in comparison with 15% in the case of the best tubes of this type produced. The absorption spectrum of the glass shows a number of relatively

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narrow maxima at 520, 573, 585, 740, 810 and 880 nm and has an absorption coefficient of from 0.5 to 3.7 cm<sup>-1</sup>. The emission band is from 883 to 925 nm and, as in all neodymium activated crystals, from 883 to 1050 nm. The time constant of the luminescence (spontaneous emission) drop and rise is 0.5 ms. The device has a relatively high threshold of stimulated energy, due in part to the optical properties of the glass and in part to the low efficiency of the tube. The stimulated energy is concentrated in a narrow space along the axis of the rod, measuring 1 mm in diameter. The total energy radiated during one pulse was measured (1,200 v to the discharge tube, i.e., approximately 45% above threshold) and determined to be about 0.07 J. Orig. art. has: 9 diagrams and 6 bibliographic entries.

ASSOCIATION: Fyzikalni ustav CSAV, Prague (Institute of Physics, CSAV)

SUBMITTED: 13Nov63

ENCL: 01

SUB CODE: EO, MT

NO REF SCW: 000

OTHER: 006

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ACCESSION NR:

AP4041660

ENCLOSURE 01

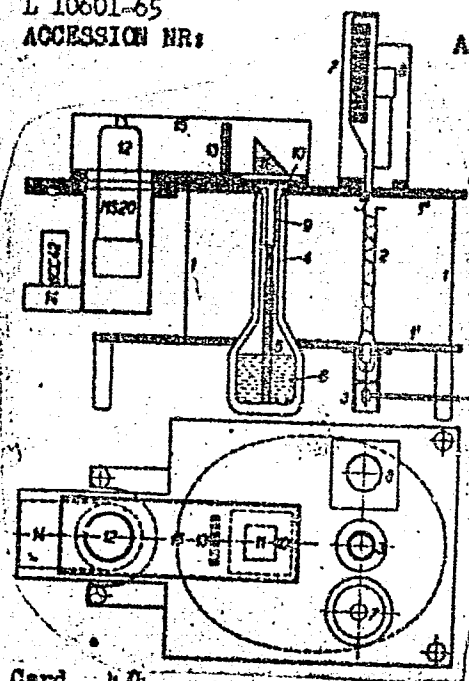


Fig. 1. Design of laser.

1 - Elliptical chamber with reflecting inside walls; 2 - neon discharge tube; 3 - current leads to discharge tube; 4 - rod of neodymium glass or crystal; 5 - cooling shaft; 6 - Döwler vessel with liquid nitrogen; 7 - va transformer igniting the discharge tube; 8 - photoelectric multiplier repeating the brightness characteristic of the discharge tube; 9 - tube; 10 - color filter R3 7; 11 - prism; 12 - photoelectric multiplier repeating the emission characteristic of the glass rod; 13 - interference filter; 14 - repeater of the photoelectric counter; 15 - cover.

L 24325-65 EWT(1)/EWP(e)/EWT(m)/EWP(t)/EEC(b)-2/EWP(b) Pg-4 IJP(c)  
JD/JG/WH

ACCESSION NR: AP4046327

Z/0055/64/014/009/0698/0706

AUTHOR: Hauptmanova, K.; Pantoflicek, J.; Patek, K. B

TITLE: Optical and luminescence properties of neodymium-activated glass

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 9, 1964, 698-706 27

TOPIC TAGS: activated barium glass, Neodymium, spectrum, absorption capability laser design, luminescence kinetics 27 15

ABSTRACT: The authors investigated the properties of barium glasses, activated with neodymium to determine their suitability for use in a laser. They measured the emission spectrum, the light absorption and the luminescence kinetics as temperature functions. From the parameters obtained the threshold of the stimulated emission was determined. The spectrum of  $Nd^{3+}$  ions in the glass was interpreted from that of a free  $Nd^{3+}$ . The effect of increasing the Nd content and other possible changes to improve the absorption capability are discussed. The laser design and the application of the investigated glass in the laser technique are also described. The author believes that the possibilities of improving the quality of the investigated glass are exhausted as far as the

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ACCESSION NR: AP4046327

quantum yield is concerned. This is true regarding the homogeneity and the purity of the glass. However, there is a possibility regarding the width of the emission curve as well as in the Nd<sup>3+</sup> structure and luminescence center. Another possibility exists in the increase of the Nd content, thus augmenting the absorption coefficient.

ASSOCIATION: Institute of Physics, Czechosl. Acad. Sci., Prague; Physical Faculty, Charles University, Prague

SUBMITTED: 66Nov63

ENCL: 00

SUB CODE: OP, EC

NO REF SOV: 001

OTHER: 017

Card  
2  
1/2

WENDER, Mieczysław; PATELSKI, Jerzy; FILIPEK, Helena

Blood lipoproteins in multiple sclerosis. Neur. &c. polska 7 no.6:  
23-32 Nov-Dec 57.

1. Z Kliniki Neurologicznej A. M. w Poznaniu Kierownik: prof. dr A.  
Dowzenko. i z Zakładu Chemii Fizjologicznej A. M. w Poznaniu.  
Kierownik: prof. dr Z. Stolzmann. Adres: Poznan, ul Garbary 40 m. 5.

(MULTIPLE SCLEROSIS, blood in  
lipoproteins, determ. (Pol))

(LIPOPROTEINS, in blood  
in multiple sclerosis (Pol))



PATEISKI, Jerzy  
WENDER, Mieczyslaw; PATEISKI, Jerzy; FILIPK, Helena

Blood proteins in multiple sclerosis. Neur. &c. polska 7 no.6:  
913-922 Nov-Dec 57.

1. Z Kliniki Neurologicznej A. M. w Poznaniu Kierownik: prof. dr  
A. Dowzenko i z Zakladu Chemii Fizjologicznej A. M. w Poznaniu.  
Kierownik: prof. dr Z. Stolzmann. Adres: Poznan, ul. Garbary 40.  
m. 5.

(MULTIPLE SCLEROSIS, blood in  
protein determ. (Pol))  
(BLOOD PROTEINS, in various dis.  
multiple sclerosis (Pol))

WENDER, Mieczyslaw; PATELSKI, Jerzy; FILIPEK, Helena

Changes in blood protein value in tuberculous encephalomeningitis.  
Gruzlica 25 no.3:195-208 Mar 57.

1. Z Kliniki Neurologicznej A.M. w Poznaniu Kierownik: prof. dr  
A. Dowzenko i z Zakladu Chemii Fizjologicznej A.M. w Poznaniu Kierownik:  
prof. dr Z. Stolzmann.

(TUBERCULOSIS, MENINGEAL, blood in  
proteins in encephalomeningitis (Pol))



KUDELA, Adolf; PATEJDL, Zdenek

Dermatoses after nettle rash. Cas. lek. cesk. 97 no.41:1303-1307 10  
Oct 58.

1. OUNZ Cheb - kozni oddeleni, prednosta MUDr. Adolf Kudela. A. K.,  
Cheb, OUNZ.

(URTICARIA

nettle rash (Cz))

PATEJDL, Zdenek, MUDr.

Contribution to the therapy of herpes zoster. Prakt. lek.,  
Praha 35 no.14:322-324 20 July 55.

1. Kozni oddeleni OUNZ Cheb. prim. MUDr. A. Kudela.  
(HERPES ZOSTER, therapy)

PATEJDLOVA, M. Dr.

ZELEENKA, J.,Dr; STANINCOVA, V.,Dr; PATEJDLOVA, M.,Dr

Toxic dyspepsias in children with antromastoiditis confirmed  
by antrobomy. Pediat. listy 9 no.2:98-100 Ap '54.

1. Z deteko-kojeneckeho oddeleni OUNZ Cheb, primar MUDr Jiri  
Zelenka.

(MATOIDITIS, in infant and child,

\*in toxic dyspepsias)

(INFANT NUTRITION DISORDERS,

\*toxic dyspepsia with mastoiditis)

**PATKY, Josef, MUDr (Brno, Zampachova 7)**

**Treatment of pregnancy nephropathies. Lek. listy, Brno 9 no.21:  
493-496 1 Nov 54.**

**1. Krajska klinicka porodnice v Brne. III. porodnicke a gynecologicke  
odd. prim. Dr Cernocha.**

**(KIDNEY, diseases,  
in pregn., ther.)**

**(PREGNANCY, complications,  
kidney dis., ther.)**

PATRY, J.

New products of the TEBIA National Enterprise in Vrsovice.

P. 872. (SIAPORAKOVY OBZOR) (Praga, Czechoslovakia) Vol. 13, No. 12, Dec. 1957

So: Monthly Index of East European Accession (EEAI) 13 Vol. 7, No. 6, 1958



CZECHOSLOVAKIA/Electronics - General

H-1

Abstr Jour : Ref Zhur - Fizika, No 10, 1958, No 23263

Author : Katek Jan

Inst : Not Given

Title : New Products of the National Enterprise Tesla Vrsovice.

Orig Pub : Slaboproudy obzor, 1957, 18, No 12, 873-876

Abstract : A brief description of new products of the National Enterprise Tesla Vrsovice, exhibited at the Third Fair of the Czechoslovak Machine Building in the city of Brno (high power generator tube, ionic rectifiers of high power, diffusion oil pump, etc.).

Cfrd : 1/1

??

PATEK, J.

PATEK, J. Stabilization of bottled wine. p. 230

Vol. 2, no. 10, Oct. 1956

KVASNY PRUMYSL

TECHNOLOGY

Praha, Czechoslovakia

So: East European Accession Vol. 6, no. 2, 1957

PATEK, K.

Movement of locomotive engineers to haul heavy tonnages on our railroads in 1953.  
p. 54. (Zeleznice, Praha, Vol. 4, no. 3, Mar. 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

PATNE, K.

"Electric Conductivity." p. 161. (MATEMATICKO-PRIRODOVEDECKE ROZHLEDY, Vol. 32, no. 1, 1953, Praha, Czechoslovakia)

So: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954/Unclassified

PATEK, 7.

Temperature dependence of electroluminescence and  
thermostimulated electroluminescence in ZnS-Cu. <sup>9</sup>  
Patek (Czechoslov. Acad. Sci., Prague). Czechoslov. J.  
Phys. 9, 585-91(1967)(in English).—Based on work by  
Thornton (C.A. 50, 11826c), a theory of the electrolumi-  
nescence of activated ZnS crystals is elaborated for the case  
of an alternating sinusoidal elec. field, assuming that elec-  
trons are liberated from the donor levels and then recom-  
bine with the ionized activator atoms; this recombination  
is accompanied by the characteristic spectral emission of the  
particular activator. Samples of 1/1000 mole Cu per mole  
ZnS crystals are used with various admixtures (ZnO, Pb,  
Cl<sup>-</sup>, Al<sup>+++</sup>) as coactivators, recrystd. at 800-900°, and  
used at a grain size of about 50  $\mu$  (crystal size in the grain is  
about 10  $\mu$ ).  
Manfred Manabheimer



PATEK, K.

K

CZECHOSLOVAKIA/Optics - Luminescence.

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2122

Author : Patek, Karel

Inst : -

Title : On Photoelectroluminescence of ZnS-Cu

Orig Pub : Ceskosl. casop. fys., 1959, 9, No 1, 47-52

Abstract : The influence of weak ultraviolet radiation was observed on the electroluminescence of ZnS-Cu over one cycle of applied alternating voltage. It was observed that along with the uniform increase in brightness over the entire cycle, an increase is observed in the first brightness maximum and a vanishing of the second maximum. Here the first maximum shifts somewhat. As the intensity of the radiated light ( $I$ ) increases, the brightness at the first maximum increases, reaching a maximum value at definite  $I_{\max}$ . The value of  $I_{\max}$  increases with increasing

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AUTHOR: Pátek, Karel

CZ/37-58-5-17/19

TITLE: Photoelectroluminescence of ZnS-Cu (K fotoelektroluminiscenci ZnS-Cu)

PERIODICAL: Československý Časopis pro Fysiku, 1958, Nr 5, p 628 (Czech)

ABSTRACT: The electroluminescence of a sample of ZnS-Cu consisted of two peaks (above zero-brightness  $L_0$ ) during each half-cycle of the applied electric field. Irradiation of the sample by ultraviolet light of intensity  $I$  during the measurement of electroluminescence had the following effects:

1.  $L_0$  increased linearly with  $I$  above zero. This was due to simple photoluminescence.
2. The first (and larger) peak in electroluminescence increased proportionally to  $I^{1/2}$ . At low frequencies of the electric field this increase reached saturation, at high frequencies no saturation was observed.
3. The second peak decreased exponentially with  $I$ .
4. The phase of the first peak relative to the applied voltage shifted forward as the second peak decreased. When it disappeared, the phase remained constant even

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Photoelectroluminescence of ZnS-Cu

CZ/37-58-5-17/19

when I was further increased.

5. The described phenomena occurred in both emission bands of this phosphor: 460 mμ and 520 mμ.

The effects are due to the increased density of free electrons caused by ultraviolet irradiation.  
There are 2 figures.

ASSOCIATION: Fysikální ústav ČSAV, Praha  
(Physics Institute, Czech Ac.Sc. Prague)

SUBMITTED: April 18, 1958

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K-6

CZECHOSLOVAKIA/Optics - Luminescence

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 28581

Author : Patek Karol  
 Inst : Physics Institute, Czechoslovak Academy of Sciences, Prague,  
 Czechoslovakia  
 Title : Luminescent "Tau-Meter" of New Types

Orig Pub : Chekhosl. fiz. zh., 1957, 7, No 6, 744-747

Abstract : The author has proposed and built a tau-meter circuit with linear time sweep, but taking the logarithm of the measured signal. To take the logarithm of the signal use is made of the characteristic dependence of the gain of a photomultiplier on the dynode voltage:  $i/I \cong \exp E$ , where  $i$  is the photomultiplier current,  $I$  the light flux incident on the cathode of the photomultiplier, and  $E$  the voltage between dynodes. The photomultiplier is connected in the circuit in which current  $i$  is maintained constant by automatic regulation of  $E$ . Then  $\log I \cong E + \text{const}$ . If the measured variation of  $I(t)$  is exponential, then  $\tau$  is determined directly from the slope of the  $E(t)$  line. To register  $E$ , the last

Card : 1/2

PATEK, K.

Thermal conditions of electroluminescence and thermo-stimulated electroluminescence of zinc sulfide crystals.

p. 526 (CESKOSLOVENSKY CASOPIS PRO FYSIKU) Vol. 7, no. 5, 1957,  
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,  
March 1958

24. 3500

67001

CZECH/37.59-1.7/26

AUTHOR: Karel Pátek

TITLE: Photo-Electroluminescence<sup>2</sup> in ZnS-Cu

PERIODICAL: Ceskoslovensky Casopis Pro Fysiku, 1959, Nr 1,  
pp 47-52 + 1 plate

ABSTRACT: The present investigation used a very low intensity of U.V. radiation acting on the phosphor during the action of electric fields. This means that the electro-luminescence was modulated by photoluminescence instead of the usual procedure of modulating photoluminescence by an electric field. The two effects show different phase relations (Fig 3) (Fig 4, p 116c). The measurements were carried out on powdered samples with  $10^{-3}$  g/g of Cu and sometimes Cl as co-activator. The phosphor was dispersed in a dielectric and a sheet of thickness 0.1-0.2 mm of this solid dispersion was introduced into an electric field of the order of  $5 \times 10^4$  V/cm. The U.V. radiation was limited to 364 m $\mu$  by an interference filter. The luminescence was filtered by a second interference filter passing either 460 m $\mu$  or 520 m $\mu$  to the photomultiplier. Fig 5 shows the momentary brightness of electro-luminescence without irradiation  $B_0$  and this brightness

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ended with

67001

Photo-Electroluminescence in ZnS-Cu

CZECH/37-59-1-7/26

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the secondary maximum of the preceding cycle (Fig 9). This is obtained even by very low intensity U.V. irradiation. While at room temperature the described changes occur instantaneously with switching on of the U.V., several minutes are needed to attain equilibrium at -150 °C. The U.V. irradiation apparently influences the excitation rather than the emission. The increased number of electrons in the conduction band due to U.V. irradiation, necessarily leads to an increased probability of excitation of an activator by accelerated electrons. A decrease of the maximum at higher levels of irradiation may be explained by one of several mechanisms, such as radiationless recombination on surfaces, decreased effective field due to increased conductivity, etc. The disappearance of the secondary maximum can be explained by the fact that the polarisation is restricted by photo-conductivity due to U.V. irradiation. There are 9 figures and 8 references, of which 1 is French, 1 German, 1 Czech, 1 Soviet and 4 are English. ✓

06628

CZECH/37-59-5-4/13

**AUTHORS:** Pátek, Karel and Damašková, Světlana

**TITLE:** Decay of Electroluminescence of ZnS-Cu

**PERIODICAL:** Československý časopis pro fysiku, 1959, Nr 5,  
pp 479 - 486

**ABSTRACT:** The decay of electroluminescence, and particularly its temperature dependence, can help in the interpretation of this effect. Matossi (Ref 3) and Hahn, Seeman (Ref 4) have previously studied the decay of electroluminescence. The present investigation uses longer pulses, so that the decay of the primary maximum (during the duration of the electric field) and the secondary maximum (without the field) can be completely observed. The decay is measured at various temperatures. The apparatus has been described previously (Ref 5). The electroluminescence of powdered ZnS-Cu was excited by square pulses of 1 msec duration, of alternate polarity with a repetition frequency of 200 c.p.s. The intensity of emission is shown in Figure 1 (p 554a) as a function of time at the temperatures of  $-200^{\circ}\text{C}$  and  $-100^{\circ}\text{C}$ . This

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06628

CZECH/37-59-5-4/13

Decay of Electroluminescence of ZnS-Cu

light sum and amplitude of the secondary maximum is more voltage-dependent than the primary maximum. The observed phenomena are explained on the basis of a model described by the author in Ref 5. The primary maximum is due to the action of the external field, while the secondary maximum is due to the internal polarization field. The decay of the primary maximum is probably determined by the reduction, due to polarization, in the intensity of the applied electric field. The decay of the secondary maximum is then due to the relaxation of the polarization. The agreement of the present results with those of previous authors (Refs 3,4) is not very good. There are 6 figures, 1 table and 5 references, of which 4 are English and 1 German.

ASSOCIATION: Fysikální ústav ČSAV, Praha (Institute of Physics of the Czechoslovak Ac.Sc., Prague)

SUBMITTED: November 8, 1958  
Card 3/3

CZECHOSLOVAKIA / Physical Chemistry. Crystals.

B

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60024.

Author : Karel Patek.

Inst : -

Title : Temperature Dependence of Electroluminescence and  
Thermally Excited Electroluminescence in ZnS - Cu.

Orig Pub: Ceskosl. casop. fys., 1957, 7, No 5, 526-532;  
Chechosl. fiz. zh., 1957, 7, No 5, 584-591.

Abstract: No abstract.

Card 1/1

APPROVED FOR RELEASE: Wednesday, June 21, 2000  
Czechoslovakia / Their Theory, Construction, Application.

Abs Jour: Ref Zhur-Khimiya, No 19, 1958, 64306

Author : ~~Patek Karel~~

Inst : Not given

Title : A New Type of Luminescent -Meter.

Orig Pub: Ceskosl. casop. fys., 1957, 7, No 6, 729-731

Abstract: Describes a  $\gamma$ -meter of a new type worked out and applied in the Physical Institute of the Czechoslovakian AS for the measurement of the time of relaxation of luminescence and other processes that proceed according to the simplest exponential law ( $-t/\gamma$ ). The action of the  $\gamma$ -meter is based on the principle of the conversion of the phenomenon of relaxation into an electric process proportional to the one investigated. In the

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PATEK, K.

CZECHOSLOVAKIA/Optics - Luminescence

K-6

Abstr Jour : Ref Zhur - Fizika, No 4, 1959, No 6779

Author : Patek Karel

Inst : -

Title : The Temperature Dependence of Electroluminescence and Thermally Stimulated Electroluminescence in AnS-Cu

Orig Pub : Ceskosl. casop. fys., 1957, 7, No 5, 526-532

Abstract : See Abstract 6778

Card : 1/1

PATEK, K

K-6

CZECHOSLOVAKIA/Optics - Luminescence

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6778

Author : Patek Karel  
Inst : Physics Institute, Prague, Czechoslovakia  
Title : The Temperature Dependence of Electroluminescence and Thermo-stimulated Electroluminescence in ZnS-Cu

Orig Pub : Chekhosl. fiz. zh., 1957, 7, No 5, 584-591

Abstract : The author has verified the Thornton hypothesis (Referat Zhur Fizika, 1957, No 6, 15643) that the mechanism of electroluminescence is similar to the mechanism of thermoluminescence; with this, the electric field increases the probability of thermal liberation of electrons, reducing the effective depth of the donor levels. It was established experimentally that in the case of thermoluminescence of non-electroluminescent phosphors no noticeable shift of the maxima is observed, i.e., there is no change in the depth of the level of the donors, it one applies to the phosphors voltage of the same magnitude, as would cause electro-

Carl : 1/2

CZECHOSLOVAKIA/Optics - Luminescence

K-6

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6778

luminescence in the corresponding phosphors. The same applies to the so-called thermostimulated electroluminescence, which is a thermoluminescent addition to electroluminescence. At these volume effects, the average field intensities that are usually applied in electroluminescence are insufficient for noticeable shifts of the depths of the levels of the donators. However, by studying the temperature dependence of the electroluminescence of a phosphor that is not optically excited, the work of dissociation decreases with increasing field and that the maximum in the temperature dependence of the electroluminescence of ZnS-Cu shifts with increasing field towards the lower temperatures. The following conclusion is drawn: the local fields in schottky-type barriers are considerably stronger than the average fields in the entire layer of the phosphor, they decrease substantially the depths of the donator levels, and it is possible to apply to these the Thornton hypothesis, which determines the probability of liberation of electrons from the following

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CZECHOSLOVAKIA/Optics - Luminescence

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6/76

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expression

$$p = n \exp \left( - \frac{E_0 - a E_0 \sin \omega t}{k T} \right)$$

In this expression  $E_0$  is the amplitude of the electric field in the barrier between the ZnS and  $\text{Cu}_2\text{S}$ . In accordance with this, the constant  $a$ , for which Thornton gave a value of  $\sim 6 \times 10^{-6}$  ev-cm/v, should be corrected; it has a magnitude on the order of  $10^{-7}$  ev-cm/v.

Abstractor's remark. The formula given above for the  $p$  conductivity is misprinted in the article. -- A.G. Gol'dman

Card : 3/3

PATSK, K.,  
JOSEF PATSK, listy Gukrova. 52, 181-97 (1934)

1. TOPIC : Czechoslovakia  
2. SOURCE :

3. JOURNAL : Radiotek., No. 2, 1959, No. 1

4. AUTHOR : Patek, Z.

5. TITLE : Not given

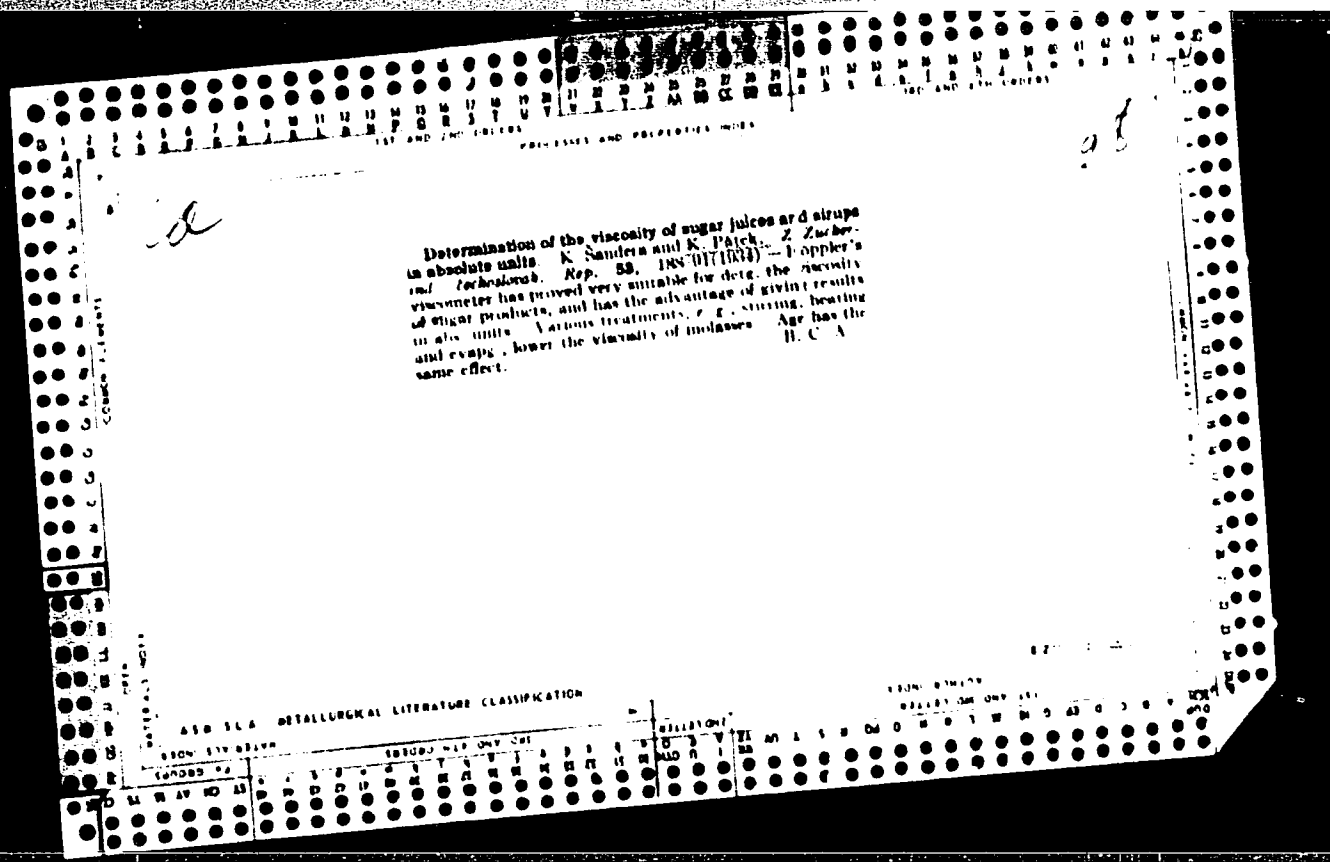
6. SUBJECT : On the photoelectric luminescence of ZnS

7. SUMMARY : The effect of wave polarization on the luminescence of the type of ZnS crystals has been investigated. The effect of observed increased luminescence in the absorption band and the pulse width (disappearance of the secondary peak) may be explained on the basis of current concepts of the mechanism of electroluminescence; however, the said effect is not completely single-valued. The author points to the need for measurements on other crystals.

8. ABSTRACT : The effect of wave polarization on the luminescence of the type of ZnS crystals has been investigated. The effect of observed increased luminescence in the absorption band and the pulse width (disappearance of the secondary peak) may be explained on the basis of current concepts of the mechanism of electroluminescence; however, the said effect is not completely single-valued. The author points to the need for measurements on other crystals.

A. Steynberg

1/1



*Patek, Karel*  
Czechoslovakia/Electricity - Semiconductors, G-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35070

Author: Patek, Karel

Institution: None

Title: On the Kinetics of Photoconductivity of Selenium

Original  
Periodical: Czechosl. Physical Journal, 1955, 6, No 2, 152-163; English resumé

Abstract: See also Referat Zhur - Fizika, 1956, 26039

Card 1/1



PATEK, K.,  
J. PAZLER, (Z. Zuckerind. Czechoslov., 1984, 58, 221-226)

PATEK, KAREL

B-5

CZECHOSLOVAKIA / Physical Chemistry. Crystals.

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25936

Author : Karel Patek  
Title : To The Question of Kinetics of Photoelectric Conductivity of Selenium

Orig Pub : Ceskosl. casop, fys., 1955, 5, No 6, 633 - 644; Chek-hosl. fiz. zh., 1956, 6, No 2, 162 - 163.

Abstract : See RZhFiz. 1956, 26039

Card : 1/1

PATEK, K.

Contribution to the kinetics of photoelectric conductivity of selenium. p. 633

Vol. 5, no. 6, Nov. 1955  
CESKOSLOVENSKY CASOPIS PRO FYSIKU  
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, 1956

PATON, KAGEL,  
JOSEF PAZLEK, Lister Sukrovan. 62, 57-1, (1933)

21  
The photoelectroluminescence of zinc sulfide: copper.  
Karl Palek (Czechoslov. Acad. Sci., Prague). Czechoslov.  
Phys. 8, 612 (1958) (in Russian).—The influence of ultra-  
violet irradiation on the time dependence of the electro-  
luminescent brightness of ZnS:Cu is investigated. The  
photoelectroluminescence behavior is the same whether  
4000- or 5200-Å. light is emitted. The observations are  
correlated with elec. polarization changes induced by ultra-  
violet light. A. Kremheller

453  
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gr

JENIK, J.; JURČEK, M.; PATEK, V.

The elimination of organic substances by means of magnesium.  
Part 8: Elementary carbohydrate as a source of defectiveness in  
determination of halogens in organic substances by means of  
elimination by metals. Coll Oz Chem 25 no.5:1450-1457 My '60.

1. Institut für analytische Chemie, Technische Hochschule für  
Chemie, Prag.

ATSK, Vladimir

Determination of styrene by bromination in ice vinegar. Chem prum  
14, no.5:258-260 My '64.

1. Chemicke zavody W. Piecka, Novaky.

13

A critical study of modern war from the viewpoint in modern chemistry. Karel Hlasek. Chem. Listy 28, 194-7(1934).—The gases yperite, chlorodiphenylarsine and cyanodiphenylarsine are considered. Chem., industrial and economic criteria are given for evaluating military gases. The Haber toxic coefficients are discussed with respect to toxiformic and autotoxic groups. Frank Mareš

COMMON ELEMENTS

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PATEK, Vladimir

Determination of chlorazoy. peroxide and chlorazoy. peroxide.  
Chem prum 14 no. 3 375-376 31 '64.

1. Chemické zavody. Plzeň, Novák.

PATEK, Zdenek, inz.

The whole enterprise for quality production. Podn org 18 no.11:  
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1. Tovarny na obrabeci stroje, Celakovice.

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ACCESSION NR: AR4015553

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SOURCE: RZH. Khimiya, Abs. 24S127

AUTHOR: Usmanov, Kh. U.; Yul'chibayev, A. A.; Mukhamedzhanov, R.; Gordiyenko, A. A.; Pateko, A. A.; Dordzhin, G. S.; Valiyev, A

TITLE: Radiation polymerization of vinyl fluoride

CITED SOURCE: Fizika i khimiya prirod. i sintetich. polimerov. Vyp. 1. Tashkent, AN UzSSR, 1962, 205-206

TOPIC TAGS: vinyl fluoride, vinyl fluoride polymerization, radiation polymerization, benzoyl peroxide, total polymerization dosage

ABSTRACT: A waxy product forms when vinyl fluoride is irradiated with Co<sup>60</sup> gamma rays at -78C and a radiation dosage of 3000 to 15,000 r. A solid product was obtained under such conditions in the presence of benzoyl peroxide. Full transition of the monomer to a polymer occurred; occurred at 5000-9000 r. P. Khomikovskiy

DATE ACQ: 29Jan64

SUB CODE: CH

ENCL: 00

Card 1/1

CA 27

Tallow substitute from vegetable oils. M. S. Patel and R. S. Kanvinde. Bombay Presidency Dept. Industries, Bull. 8, 9 pp. (1934). — A substitute for tallow, suitable for sizing textiles, was prepd. from a mixt. of peanut oil 80, coconut oil 15 and castor oil 5%. The mixt. was purified by removing the free fatty acids by neutralization and drying the alkali-free washed oil *in vacuo*. The purified mixt. was hydrogenated, with finely divided Ni as catalyst, until the product had a m. p. of about 50°. The characteristics of the material thus obtained were: I value 38.0, sapon. value 105.7, m. p. 49.5°, mixed fatty acids 91.7%, neutralization value of mixed fatty acids 108.0, m. p. of mixed fatty acids 49.5° and I value of mixed fatty acids 41.0; the product was white, homogeneous granular and odorless. The characteristics were very similar to those of animal tallow. Data are given on the compns. of various vegetable tallows marketed in India.

K. D. Jacob

ASD 51.4 METALLURGICAL LITERATURE CLASSIFICATION

GROUP	CLASS	SUBCLASS	DETAILS
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
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24	24	24	24
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93	93	93	93
94	94	94	94
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96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

PAGE 1.

Why should India produce 10 million tons of steel? Br. from the English. . .  
(Kohaszati lapok Budapest Vol. 11, no. 16, Oct. 1956) Orade Vol. 1, no. 1.

SO: Monthly List of East European Accessions (EEAL) LC., Vol. 6, no. 7, July 1957. Incl.

1st and 2nd copies

3rd and 4th copies

PROCESS AND PROPERTIES INDEX

17

The  $\alpha$ -hormone, cythin, of the corpus luteum. S. J. PATEL, Major Biol. Kaskala  
 Israel Month 4, 481 700 English 485 (1961) Hormone of the corpus luteum of  
 cows (cythin) caused pseudopregnancy in ovariectomized animals. Cythin can be  
 detected by production of mucification in ovariectomized mice. The hormone dissolves  
 in fat solvents and is not saponifiable. S. S. DE FIDELIS

ASD-55A METALLURGICAL LITERATURE CLASSIFICATION

1900-1950

1951-1960

1961-1970

1971-1980

1981-1990

1991-2000

2001-2010

2011-2020

2021-2030

2031-2040

2041-2050

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2071-2080

2081-2090

2091-2100

2101-2110

2111-2120

2121-2130

2131-2140

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2151-2160

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2171-2180

2181-2190

2191-2200

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9

PATELIC, M.L.

*met.* Effects of qualitatively different diets on gastric secretion.

M. Boric, Mihosajević, and M. Patelić. *Dall. acad. serbe sci.* 11, 104-8(1954); *Excerpta Med.*; Sect. 11, 8, 1151 (1955).—The effects of a N-free diet (starch, sugar, fats, salt, and fruit) were compared with those of a similar diet supplemented by 60 g. skim-milk powder and of one contg. 184 g. of maize flour, with regard to the fasting acidity, vol. of gastric contents, and change in acidity after administration of caffeine. The stimulant action of caffeine was practically always followed by a large decrease of the acid value. The maize diet appeared to have an inhibitory effect on gastric secretion, except when it acted on a hyperacid stomach. Milk showed a marked stimulant action on the stomach, but this was only temporary. The N-free diet had the least influence on gastric secretion. These findings agree on the whole with those of Razoukov on animals.

E. I. C.

3

ALEKSANDROV, Yevgeniy Vasil'yevich; PATELOVSKAYA, M.I., red.;  
MOCHALINA, Z.S., tekhn. red.

[Safety manual for roofers] Pamiatka po tekhnike bez-  
opasnosti dlia krovel'shchika. Izd.3., ispr. i dop. Mo-  
skva, Gosstroizdat, 1963. 20 p. (MIRA 17:3)



HORYD, Wanda; PATELSKA, Teresa

Conservative treatment of temporal lobe epilepsy. Neurol.  
neurochir. psychiat. Pol. 15 no.3:433-438 My-Je '66.

1. Z Oddziału Neurologicznego Instytutu Psychoneurologicznego  
w Pruszkowie (Kierownik: prof. dr. med. A. Dowzenko) i z  
Wojewódzkiej Poradni Przeciwpadaczkowej w Poznaniu (Kierownik:  
dr. med. Z. Huber).

PATELSKI, J.; SZWEDZIKOWSKI, S.

Effect of cholinesterase inhibitors on lipolytic activity of the aorta in rats. Acta physiol.polon. 11 no.5/6:858-859 '60.

1. Z Zakladu Chemii Fizjologicznej A.M. w Poznaniu, Kierownik: prof.dr Z.Stolzmann. Z Zakladu Anatomii Patologicznej A.M. w Lodzi, Kierownik: prof.dr A.Pruszczyński,

(CHOLINESTERASE anatag)

(AORTA pharmacol)

(FATTY ACIDS metab)

PATELSKI, J.; SZENDZIKOWSKI, S.

Lipolytic and esterolytic activity of aorta after prolonged ACTH  
treatment in rats. Bull. soc. amis sci. poznan [med] 11:37-47 '62.

(AORTA chemistry) (LIVER chemistry)

(ADRENAL GLANDS chemistry) (LIPIDS chemistry)

(FATTY ACIDS blood) (ESTERASES chemistry)

(DEHYDROGENASES chemistry) (CORTICOTROPIN pharmacology)

PATELSKI, J.

Statistical interpretation of changes in serum cholesterol concentrations  
in dogs following ACTH administration. Bull. soc. am's sci. poznan (med)  
11:25-36 '62.

(CHOLESTEROL blood) (CORTICOTROPIN pharmacology)  
(PROTEINS deficiency)

PATELSKI, J.

POLAND/Human and Animal Physiology. Blood Circulation.  
Blood Vessels.

T

/ Abs Jour: Raf Zhur-Biol., No 20, 1958, 93255.

Author : Chodera, Leon, Szereszewska, Malina, Patelski Jerzy.

Inst :

Title : Permeability of Capillaries for Plasma Proteins and Lipoproteins in Healthy People. Communication I.

Orig. Pub: Polski tygod. lekar., 1957, 12, No 40, 1521-1524.

Abstract: A study was made of capillary filtration by the Landis and krogli method and of electrophoretic patterns of proteins and lipoproteins of the plasma content in 20 healthy people. In some cases plasma proteins escaped into the capillary filtrate with application of venous stasis under a pressure of 40 mm Hg. With a pressure of 40 and 80 mm globulins were also encountered in the

Card : 1/2

ROZYNKOWA, Danuta; PALUSZAK, Janusz; PATELSKI, Jerzy; KOZIOLOWNA, Wieslawa

The influence of lipid content and degree of saturation of fatty acids in the diet and of cholesterol and cholic acid on the serum lipids in rats. Acta med. pol. 3 no.4:429-439 '62.

1. Department of General and Experimental Pathology, Medical Academy,  
Poznan Director: Prof. Dr A. Horst Department of Physiological Chemistry,  
Medical Academy, Poznan Director: Prof. Dr Med. and Phil. Z. Stolzmann.  
(BLOOD LIPIDS) (CHOLESTEROL) (BILE ACIDS AND SALTS)  
(FATTY ACIDS) (LIPIDS) (DIET)

CHODERA, L.; SZERESZEWSKA, H.; ROZYNEK, M.; DABROWSKI, H.; PISKORZ, A.;  
PATELSKI, J.; FILIPEK, H.

Vascular changes in experimental mechanical jaundice with  
hyperlipemia. Polskie arch.med. wewn. 30 no.7:1006-1009 '60.

1. Z I Kliniki Chorob Wewnętrznych A.M. w Poznaniu Kierownik:  
prof. dr med. S.Kwasniewski.

(JAUNDICE OBSTRUCTIVE exper)

(LIPIDS blood)

(CARDIOVASCULAR SYSTEM pathol)

PATELSKI, Jerzy; ROZYNKOWA, Danuta; PALUSZAK, Janusz

Lipolytic activity of rat aorta in relation to lipid concentrations and degree of saturation of the fatty acids in blood. Acta med. pol. 3 no.4:417-427 '62.

1. Department of Physiological Chemistry, Medical Academy, Poznan-Director: Prof. Dr Med. and Phil. Z. Stolzmann Department of General and Experimental Pathology, Medical Academy, Poznan.Director: Prof. Dr A. Horst.

(AORTA) (BLOOD LIPIDS) (CHOLESTEROL)  
(BILE ACIDS AND SALTS)



PATELSKI, Jerzy; DEPCZYNSKI, Leszek; KUCZEWSKA, Krystyna

The problem of neurohormonal disorders in the regulation of the concentration and composition of blood lipids in schizophrenic and neurotic patients. Neurol. neurochir. psychiat. pol. 13 no.2:257-267 '63.

1. Z Zakladu Chemii Fizjologicznej AM w Poznaniu Kierownik: prof. dr fil. i med. Z. Stolzmann i z Panstwowego Sanatorium dla Nerwowo Chorych w Koscianie Dyrektor: lek. med. K. Kuczevska.  
(BLOOD LIPIDS) (SCHIZOPHRENIA) (NEUROSES)

DEPCZYNSKI, Leszek; KUCZEWSKA, Krystyna; PATELSKI, Jerzy

Concentration of total proteins and the electrophoretic picture of the protein fractions in the blood serum in schizophrenic and neurotic patients. Neurol. neurochir. psychiat. pol. 13 no.2:269-276 '63.

1. Z Panstwowego Sanatorium dla Nerwowo Chorych w Koscianie  
Dyrektor: lek. med. K. Kuczevska i z Zakladu Chemii Fizjologicznej AM w Poznaniu Kierownik: prof. dr fil. i med. Z. Stolsmann.  
(BLOOD PROTEINS) (BLOOD PROTEIN ELECTROPHORESIS)  
(SCHIZOPHRENIA) (NEUROSES)

PATELSKI, J.

Influence of adrenocorticotrophic hormone on protein and lipid pattern in blood investigated in dogs. Bull. Soc. amis sc. Poznań [med] Ser. no.12:25-49 '63.

WONDER, Mieczysław; FILIPEK, Helena; PATELISKI, Jerzy

Electrophoretic determination of serum proteins in chorea minor.  
Neur. &c. Polska 7 no.3:400-414 May-June 57.

1. Z Kliniki Neurologicznej A. M. w Poznaniu Kierownik: prof dr  
A Dowzenko i z Zakładu Chemii Fizjologicznej A. M. w Poznaniu Kierownik:  
prof dr Z Stolzmann. Adres Poznań ul. Maryny 40 m 5.  
(CHOROA, blood in,  
proteins, electrophoresis (P-1))

Z/039/60/021/08/028/032  
E073/E535

AUTHOR: Pátek, Karel

TITLE: Second All Czechoslovak Meeting on Luminescence

PERIODICAL: Slaboproudý obzor, 1960, Vol 21, No 8, pp 511-512

ABSTRACT: The meeting was convened by the Physics Institute, Czechoslovak Academy of Sciences. 47 participants attended who represented seven manufacturing plants, two research establishments, the Institute of Technical Physics, Czechoslovak Academy of Sciences, Mathematics-Physics Department of Charles University and the State Commission for Technical Development. Nineteen papers were read on electro-luminescence, cathode-luminescence, scintillators, alkali and silver halogenides.

M. Trlifaj read a paper on the prospects and trends of development of luminescence from the physical and technical points of view in which he reported on the present state of research. Members of the firms Spolana, Kaznějov, TESLA Holešovice, OZAP etc read papers on the manufacture and development of luminophors

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Z/039/60/021/08/028/032  
E073/E535

Second All Czechoslovak Meeting on Luminescence

and the demands to be met by basic and applied research. The second part of the meetings were devoted to electroluminescence and papers on this field of subjects were read by representatives of VUVET, TESLA Holešovice, OZAP and Physics Institute, Czechoslovak Academy of Sciences. In the third section four papers were read by representatives of VUVET, TESLA Rožnov and the Mathematics-Physics Department of Charles University on the research development and application of cathode luminophors and certain special problems in this field, mainly as regards phosphors used in television. In the fourth section papers were read on the development of scintillators in Czechoslovakia (TESLA Liberec) and on basic research on alkaline (UTF) and silver halogenides (FÚ KU). Resolutions were passed on the necessity of delimiting work on certain luminophors, concentration of work on television luminophors, sending development groups into manufacturing plants and coordination.

Card 2/2

KUZNETSOV, Semen Ivanovich: 1901-1951, 1951, 1952.  
PATECHSKAYA, P.I., 1951.

[Fire prevention in work involving fire hazards] Po-  
sharnaya profilaktika pri proizvodstve ognivyykh robot.  
Moskva, Strizhat, 1951. 46 p. (MIRA 17:1)

SOV/169-59-5-4384

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 5, pp 15 - 16  
(USSR)

24.1800

AUTHORS: Sollogub, V.B., Galushko, P.Ya., Vopilkin, A.A., Patiokhi, A.M.

TITLE: On the Propagation Velocity of Longitudinal Elastic Waves in Rocks and Its Dependence on the Static Load and on the Humidity

PERIODICAL: Tr. In-ta geol. nauk. AS USSR, Ser. geofiz., 1958, Nr 2, pp 130 - 137

ABSTRACT: Investigating the effect of the load on the propagation velocity of elastic waves, the authors exposed a rock specimen with cubic form to a one-sided compression by means of a hydraulic press. The velocities of the supersonic waves were measured in intervals of pressure of 20 kg/cm<sup>2</sup>. The velocity of wave in sandstone increased by 5 m sec<sup>-1</sup>. atm for the pressure increasing from 0 to 120 kg/cm<sup>2</sup>. Increasing the load from 120 to 420 kg/cm<sup>2</sup> causes an insignificant increase of the velocity, but a further increase of the load beyond 420 kg/cm<sup>2</sup> causes a decrease in velocity. Under a pressure of 610 kg/cm<sup>2</sup>, the specimen collapsed. The similar

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SOV/169-59-5-4384

On the Propagation Velocity of Longitudinal Elastic Waves in Rocks and Its Dependence on the Static Load and on the Humidity

course of behavior of the velocity was observed by testing lime-stone, but the values of load corresponding to the points of inflection of the curve, and also the values of velocity were different. The observed variations of the velocity correspond to: 1) The decrease in the porosity under the pressure effect; 2) the redistribution of the elementary particles of the rock. A decrease in velocity with a further increase in pressure can be explained by the formation of cracks. A certain dependence exists between the density of the rocks and the propagation velocity of the elastic waves. It is possible that this dependence may be used for practical purposes. In halite specimens, the velocity of longitudinal waves perpendicular to the applied load decreased considerably with increasing pressure; but in the plane parallel to the applied load, the velocity insignificantly decreased. The saturation of the rock specimen with water increased the velocity; but the variations of the velocity in chalk and for coquina were smaller than in less porous sandstone. The investigation of the variation of velocity under multiple cycles of loading and unloading showed that a residual deformation is not observed in dense rocks

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SOV/169-59-5-4384

On the Propagation Velocity of Longitudinal Elastic Waves in Rocks and Its Dependence on the Static Load and on the Humidity

(sandstone). In more porous rocks the value of the velocity increases in comparison to the initial velocity in consequence of the residual deformation after taking off the load. Be repetitive pressures, velocities increase again and attain higher values than during the first cycle of loading. Consequently, it can be assumed that the velocity of propagation of elastic waves in rocks depends on the geologic history of the region in question. In regions where numerous changes of sedimentation and of denudation occurred, the rocks were submitted to a greater compression and must be characterized by a higher velocity than the similar rocks in regions where the change of the processes took place not so frequent. Bibl. 10 titles.

I.K. Kupalov-Yaropolk

Card 3/3

PATELSKI, JERZY

WENDER, Mieczyslaw; ELIPEK, Helena; PATELSKI, Jerzy

Considerations on the problem of protein disorders in Guillain-Barre  
radicular polynueitis. Polski tygod. lek. 12 no.39:1492-1495 Sept 57.

1. Z Kliniki Neurologicznej A. M. w Poznaniu; kierownik: prof. dr A.  
Dowzenko i Z Zakladu Chemii Fizjologicznej A. M. w Poznaniu; kierownik:  
prof. dr Z. Stolsman. Adres: Poznan, ul. Garbary 40 m 5.

(GUILLAIN-BARRE SYNDROME, blood in,  
proteins, disord. (Pol))

(BLOOD PROTEINS, in v<sub>r</sub>. dis.  
Guillain-Barre synd. (Pol))

SKERSZEWSKA, Halina; CHODERA, Leon; PATELSKI, Jerzy

Selective investigations of permeability of peripheral capillaries...  
in relation to proteins & lipoproteins. Polskie arch.med. wewn.  
28 no.4:591-595 1958.

1. Z I Kliniki Chorob Wewnętrznych A.M. w Poznaniu Kierownik:  
prof. dr med. S. Kwasniewski. Adres autora: Poznan, ul. Długa, 1/2  
I Klinika Chorob Wewn. A.M.

(CAPILARY PERMEABILITY,  
of peripheral capillaries in relation to blood proteins  
& lipoproteins (Pol))  
(BLOOD PROTEINS,  
relation of proteins & lipoproteins to permeability  
of peripheral capillaries (Pol))

PATELSKI, JERZY

CHODERA, Leon; SZERESZEWSKA, Halina; PATELSKI, Jerzy

Capillary permeability for proteins and lipoproteins in healthy persons. Polski tygod. lek. 12 no.40:1521-1524 7 Oct 57.

1. Z I Kliniki Chorob Wewnętrznych A. M. w Poznaniu; kierownik: prof. dr Stefan Kwasniewski i z Zakładu Chemii Fizjologicznej w Poznaniu; kierownik: prof. dr Zdzisław Stolsman. Adres: Poznań, ul. Długa 1/2 I Klin. Chor. Wewn. A. M.

(CAPILLARY PERMEABILITY, determ.  
to proteins & lipoproteins)

(PROTEINS  
filtrability through capillary walls)

(LIPOPROTEINS  
same)

EXCERPTA MEDICA Sec. 6 Vol. 11/8 Aug. 57

*PATELSKI J.*

4920. PATELSKI J., SZERESZEWSKA H. and CHODERA L. Zakł. Chem., Fizjol. i i Klin. Chor. Wewn. A.M., Poznań. \* Lipoproteiny krwi w zespołach nerczycowych. Blood lipoproteins in the nephrotic syndrome POL. ARCH. MED. WEWNĘT. 1956, 26/10 (1515-1528) Tables 4 Illus. 2

Blood lipoprotein determinations by means of paper electrophoresis in 22 patients suffering from nephrotic syndrome showed: (1) an increase of both lipoprotein fractions ( $\alpha$  and  $\beta$ ), (2) an increase of the lipoprotein  $\beta/\alpha$  index, (3) no correlation of serum cholesterol level with hypo- and dysproteinaemia, (4) a correlation of the lipoprotein  $\beta/\alpha$  index with serum protein pattern and with the severity of the clinical condition.

Michajlik - Warsaw

PATELSKI, Jerzy

WENDER, Mieczyslaw.; PATELSKI Jerzy.; FILIPEK, Helena.

Clinical value of quantitative determination of gamma globulin in the cerebrospinal fluid. Polski tygod. lek. 12 no.26:981-985 24 June 57.

1. Z Kliniki Neurologicznej A. M. w Poznaniu; kierownik: prof. dr. A. Dowzenko i z Zakladu Chemii Fizjologicznej A. M. w Poznaniu Kierownik. Prof. dr Z. Stolzmann.

(GAMMA GLOBULIN, in cerebrospinal fluid, determ. (Pol))

PATELSKI, JERZY

WENDEK, Mieczyslaw; PATELSKI, Jerzy; FILIPEK, Helena

Electrophoretic changes of serum protein picture following  
pneumoencephalography. Polski tygod. lek. 12 no.31:1189-1194  
29 July 57.

1. ( Z Kliniki Neurologicznej A. M. w Poznaniu; kierownik prof.  
dr A. Dowzenko i z Zakladu Chemii Fizjologicznej A. M. w Poznaniu;  
kierownik: prof. dr Z. Stolzmann). Adres: Poznan, ul. Garbary 40  
M. 5.

(VENTRICULOGRAPHY,  
pneumoencephalography, eff. on blood proteins,  
electrophoresis (Pol))  
(BLOOD PROTEINS,  
eff. of pneumoencephalography, electrophoresis (Pol))



PATELSKI, Jerzy; SZERESZEWSKA, Halina; CHODERA, Leon

Blood lipoproteins in nephrotic syndromes. Polskie arch. med.  
wewn. 26 no.10:1515-1528 1956.

1. Z Zakładu Chemii Fizjologicznej A.M. w Poznaniu Kierownik:  
prof. dr. med. Z. Stolzmann i I Kliniki Chorob Wewnętrznych A.M.  
w Poznaniu Kierownik: prof. dr. med. S. Kwasniewski. Poznań, I  
Klinika Chorob Wewn. A.M. ul. Długa 1/2.

(NEPHROSIS, blood in,  
lipoproteins (Pol))  
(LIPOPROTEINS, in blood,  
in nephrosis (Pol))

PATELSKI, Jerzy; SZERESZEWSKA, Halina; CHODERA, Leon

Blood lipoproteins in nephrotic syndromes. Polskie arch. med.  
wewn. 26 no.10:1515-1528 1956.

1. Z Zakładu Chemii Fizjologicznej A.M. w Poznaniu Kierownik:  
prof. dr. med. Z. Stolzmann i I Kliniki Chorob Wewnętrznych A.M.  
w Poznaniu Kierownik: prof. dr. med. S. Kwasniewski. Poznan, I  
Klinika Chorob Wewn. A.M. ul. Długa 1/2.

(NEPHROSIS, blood in,  
lipoproteins (Pol))  
(LIPOPROTEINS, in blood,  
in nephrosis (Pol))

SZYRESZEWSKA, Halina; CHODERA, Leon; PATELSKI, Jerzy

Proteins and lipoproteins in the blood in diabetes mellitus.  
Polskie arch. med. wewn. 26 no.10:1529-1542 1956.

1. Z I Kliniki Chorob Wewnętrznych A.M. w Poznaniu Kierownik:  
prof. dr. med. S. Kwasniewski i z Zakładu Chemii Fizjologicznej  
A.M. w Poznaniu Kierownik: prof. dr. med. Z. Stolzmann. Poznan,  
I Klinika Chorob Wewn. A.M., ul Długa 1/2.

(DIABETES MELLITUS, blood ind.,  
lipoproteins & proteins (Pol))  
(BLOOD PROTEINS, in various diseases,  
diabetes mellitus (Pol))  
(LIPOPROTEINS, in blood,  
in diabetes mellitus (Pol))

DOWZENKO, Anatol; WENDER, Mieczyslaw; PATELSKI, Jerzy

Cerebrospinal fluid changes in disseminated sclerosis of unusual intensity; clinical observations. Neur. &c. polska 6 no.2:171-179 Mar-Apr 56.

1. Z Kliniki Chorob Nerwowych A.M. w Poznaniu Kierownik: prof. dr. A. Dowzenko, Z Zakladu Chemii Fizjologicznej A.M. w Poznaniu Kierownik: prof. dr. Z. Stolzmann.

(CEREBROSPINAL FLUID, in various diseases,  
multiple sclerosis of unusual intensity (Pol))  
(MULTIPLE SCLEROSIS, cerebrospinal fluid in,  
case of unusual intensity (Pol))

1ST AND 2ND CODES																										3RD AND 4TH CODES																									
PROCESSING AND PRIORITY MODES																																																			
<p><i>c</i></p> <p><b>Thin-layer feeding of charge. A. P. PATENKO, A. A. GRACHEV, AND V. G. GURTOV. <i>Svetlo i Kham.</i> 5 (4) 10-14 (1948).--Details are given of modifications made to the thin-layer mechanism (TZ) at the (Sov'kiz) glass plant. The capacity of the feeder is 90 to 100 tons per 24 hr., but it can be raised to 8 to 9 tons per hr. As a result of the rapid combustion of the coal in the thin layer of the charge, a great portion of it did not take part in the dissociation of the sulfate, and it was necessary to raise the coal content from 7 to 8 to 8.5%. H.Z.K.</b></p>																																																			
<p>ASB-55 A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
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PATENKO

AUTHOR: None Given

72-2-16/20

TITLE: The Production of Glass in the Ukrainian SSR Must be Developed  
(Razvivat' proizvodstvo stekla v USSR)  
From the Technical Conference of ~~Representatives~~ of the Glass Industry  
(S tekhnicheskogo soveshchaniya rabotnikov stekol'noy  
promyshlennosti).

PERIODICAL: Steklo i Keramika, 1958. Nr 2, pp. 43-45 (USSR)

ABSTRACT: This conference was called by the Ministry for the Industry of Building Materials of the Ukrainian SSR as well as by the Ukrainian- and Stalin-Regional NTO for Building Materials and took place on December 10-12, 1957 at Konstantinovka. The minister for the building material industry of the Ukrainian SSR, Moroz, opened the conference and stressed the fact that the production of glass must be increased. The following reports were further delivered:

- 1.) Patenko, (Deputy Minister for the Building Material Industry) spoke about the present stage of the glass industry, and pointed out what work must be carried out in future.
- 2.) Solinov (Director of the Institute for Glass) gave a report concerning new kinds of glass products for dwelling- and industrial buildings and how they are to be properly used in practice.

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The Production of Glass in the Ukrainian SSR Must be  
Developed. From the Technical Conference of Representatives  
of the Glass Industry

72-2-18/20

- 3.) Dubrovskiy (Director of the Ukrainian Branch of the Institute for Glass) described the work carried out by this institute.
- 4.) Tykachinskiy (Institute for Glass) gave a detailed description of the part played by the factors determining the intensity of the process of glass melting.
- 5.) Zhirnov ("Proletariy" plant) spoke about the success achieved by this plant.
- 6.) Lev (Representative of the Giprosteklo Institute) spoke about the distribution of new products.
- 7.) Alekseyev (Academy for Building and Architecture of the USSR) spoke about the assortment, quality, and value of building glass.
- 8.) Il'inskiy (Head of the Pyrometric Department of the Giprosteklo) spoke about the perfecting of glass smelting furnaces during future repair work.
- 9.) K.I. Borisov (PKB of the Institute for Glass) spoke about improved constructions of glass smelting furnaces and flues.

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- 10.) Solomin, Professor (Institute for Glass) spoke about refractories for tank furnaces.
- 11.) Pronin (Lisichansk Works) reported about dinas products of high stability.
- 12.) Bondarev (Director of the "Avtosteklo" Works, Konstantinovka) dealt with prospects for building glass.
- 13.) Firer (Representative of the Gomel Plant) spoke about the production and use of glass tubes and foam glass.
- 14.) Zabkov (Director of the Plant imeni October Revolution) spoke about the prospects of the production of special glass products.
- 15.) Bazhbeyk-Melikov (Scientific Collaborator of the Institute for Glass) gave a report on building glass blocks.
- 16.) Abakumov (Chief Engineer of the Skopino Works) spoke about the production of glass blocks in this plant.
- 17.) Shatokhin (Institute for Glass), Polik (Institute for Glass Fibres), Koryagina (Ivotsk Plant) spoke about glass fibres.

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The Production of Glass in the Ukrainian SSR Must be  
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of the Glass Industry

72-2-18/20

- 18.) Perederiyenko (Director of the Glass Works at Lvov) spoke about plate glass of high quality.
- 19.) Myasnikov (Dotsent of the Polytechnic Institute of Kiyev) spoke about the production of glass tiles.
- 20.) Reznikov (PKB of the Institute for Glass), Minakov ("Avto-steklo" Works, Konstantinovka), Dolbin ("Proletariy" Works), Kolesnikov (Plant imeni October Revolution), Zhirnov (TsKB MPSM Ukrainian SSR) spoke about problems of mechanization.
- 21.) Pod"yel'skiy spoke about the packing of glass.
- 22.) Baklanov (Head of the Sovnarchose Stalinsk) spoke about the development of new building materials in that province.
- 23.) Potanin (Deputy Chief of the Department for Building Materials of the Gosplan USSR) spoke about general problems of the glass industry.

Decisions were made with a view of increasing the efficiency and the quality of the products of glass works and the works producing

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The Production of Glass in the Ukrainian SSR Must be  
Developed. From the Technical Conference of Representatives  
of the Glass Industry

72-2-12/20

refractories. On the basis of the Ukrainian branch it is intended  
that a Ukrainian Scientific Research Institute for Glass be  
established at Konstantinovka.

AVAILABLE: Library of Congress

Card 5/5

USMANOV, Kh.U.; YUL'CHIBAYEV, A.A.; MUJHAMEDZHANOV, R.; GORDIYENKO, A.A.;  
VALIYEV, A.; PATENKO, A.A.; DORDZHIN, G.S.

Radiation polymerization of vinyl fluoride. Vysokom.soed. 5  
no.8:1277 Ag '63. (MIRA 16:9)  
(Vinyl compounds) (Polymerization) (Radiation)

ACCESSION NR: AT4040808

S/3099/62/000/001/0205/0206

AUTHOR: Usmanov, Kh. U. ; Yul'chibayev, A. A. ; Mukhamedzhanov, R. /  
Gordiyenko A. A. / Patenko A. A. / Dordzhin G. S. / ~~Valiyev~~ Valiyev, A.

TITLE: Radiation polymerization of vinyl fluoride

SOURCE: AN UzSSR. Institut khimii polimerov. Fizika i khimiya prirodn<sup>nykh</sup> i sinteticheskikh polimerov, no. 1, 1962, 205-206

TOPIC TAGS: vinyl fluoride, polyvinylfluoride, radiation polymerization, benzoyl peroxide catalyst

ABSTRACT: The authors describe some of the results of a systematic study carried out at the Laboratoriya khimii polimerov Tashkentskogo gosuniversiteta (Laboratory of Polymer Chemistry, Tashkent State University) to determine the optimal conditions for the production of polyvinylfluoride. In this study, the reaction between acetylene and anhydrous hydrogen fluoride was carried out in the gas phase at 100-120C in the presence of mercury and barium chlorides absorbed on activated charcoal. The reaction mixture was cooled with the aid of dry ice to - 78C, and the monomer which condensed at this temperature was placed into glass ampules and irradiated with various doses of  $\gamma$ -rays from CO<sup>60</sup>.

Card 1/2